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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,831	03/28/2001	Daniel Seligson	INTL-0429-US (P9135)	1550

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EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,831

Applicant(s)

SELIGSON, DANIEL

Examiner

Regina Liang

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 1-4, 6-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al (US. PUB. NO. 2002/0001046 hereinafter Jacobsen) in view of Matthies (US. PAT. NO. 6,498,592).

As to claim 1, Jacobsen discloses an apparatus and method for forming an active matrix display along a length of a substrate. Figs. 7 and 9 of Jacobsen discloses forming recesses (54) and a plurality of display elements on a substrate (52), and mounting an integrated circuit block in the recesses and coupling the integrated circuit block to the display elements (see page 5, sections [0082] to [0084] for example). Jacobsen does not disclose the display comprising a tiled display. However, Figs. 1 and 4 of Matthies discloses a display device comprising a plurality of substrates, a plurality of display elements formed on each substrate (a tile, see Fig. 3), and an integrator (optical integrator) to couple the substrates to form a tiled display. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jacobsen to comprise a tiled display as taught by Matthies so as to provide large-area display devices which are formed as an array of tiled display devices to serve as the human interface for conveying information from sensors, computers, databases, cameras etc. in this information dominated age.

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As to claims 2 and 3, Jacobsen teaches the display comprising LEDs or OLEDs (page 1, section [0007]).

As to claim 4, Jacobsen teaches the circuit block contains driver circuitry (e.g., MOSEFET and capacitor, page 1, lines 10-11 in section [0012]), and Matthies teaches the driving circuit 134 in Fig. 1A is an integrated circuit, thus Jacobsen as modified by Matthies teaches the integrated circuit block as claimed.

As to claim 6, Fig. 7b of Jacobsen shows each block and the substrate are complementarily shaped.

As to claim 7, Jacobsen teaches the block is a driver circuit for the display elements (page 5, section [0082]).

As to claim 8, Jacobsen teaches the block is located between a plurality of display elements (see Fig. 14c and page 5, section [0089]).

As to claim 9, Jacobsen teaches the block is metallized with the substrate (page 5, section [0084]).

As to claim 10, Matthies teaches a ceramic back plane (col. 6, lines 2-23), and Jacobsen teaches the front plane including the block (52 in Fig. 7b).

As to claim 11, Jacobsen teaches the block contains MOSFET (this corresponds to silicon substrate) and the substrate is formed of glass (page 1, lines 6-8 in section [0012]).

As to claims 18, 23, 24, Jacobsen teaches the recesses on the substrate having various sizes (page 6, section [0096]). Jacobsen as modified by Matthies does not disclose the blocks are nanoblocks. However, it would have been an obvious matter of design choice to modify the display device of Jacobsen as modified by Matthies to form the recesses on the substrate having

a size for receiving nanoblocks as claimed, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

As to claims 19-22, Jacobsen discloses method of forming recesses on a substrate as claimed (see Figs 9 and 10, and page 5, sections [0082] to [0084]).

As to claim 12, Matthies teaches the display comprising an optical integrator (mullions) placed above the plane containing the pixel (front plane, see col. 18, line 8 to col. 19, line 29) so that the front plane of the display device is located between a back plane and the optical integrator.

As to claims 13 and 14, Jacobsen teaches the display comprising LEDs or OLEDs (page 1, section [0007]).

As to claim 15, Jacobsen teaches the circuit block contains driver circuitry (e.g., MOSEFET and capacitor, page 1, lines 10-11 in section [0012]), Matthies teaches the driving circuit 134 in Fig. 1A is an integrated circuit, thus Jacobsen as modified by Matthies teaches the integrated circuit block as claimed.

As to claim 16, Fig. 7b of Jacobsen teaches the block is deposited in a recess formed in the front plane (52).

As to claim 17, Jacobsen teaches the driver circuits for the display elements (page 5, section [0082]).

Response to Arguments

3. Applicant's arguments with respect to claims 1-4, 6-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Holman (US. PUB. NO. 2004/0004609) teaches a substrate of a display device having recesses (Fig. 3A).

Takahara et al (US. PAT. NO. 4,906,071) teaches a LCD device with driving circuit connection scheme.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL
9/24/04